

WHAT IS CLAIMED IS:

1. A method of manufacturing a flash memory device, comprising the steps of:
 - 5 performing an ion implantation for controlling a threshold voltage on a semiconductor substrate;
 - performing a spike annealing for controlling a doping concentration and a doping profile of an implanted dopant;
 - 10 forming a device isolation film for isolating an active area and a field area on the semiconductor substrate;
 - 15 forming a gate electrode in which a tunnel oxide film, a floating gate electrode, a dielectric film, and a control gate electrode are deposited on the active area; and
 - performing an ion implantation for forming junctions on the semiconductor substrate in both sides of the gate electrode to form a DDD junction structure.
2. The method of manufacturing a flash memory device according to claim 1, wherein the ion implantation for controlling a threshold voltage is performed by using a p-type dopant with an ion implantation energy of 5 KeV to 50 KeV and a dose of 1E11 ion/cm² to 1E13 ion/cm².
3. The method of manufacturing a flash memory device according to claim 2, wherein BF₂ is used as the p-type dopant.

4. The method of manufacturing a flash memory device according to claim 1, wherein the spike annealing is performed under NH₃, H₂, or N₂ atmosphere at a temperature in the range of 900°C to 1,100°C with a heating rate of 100°C/sec to 250°C/sec.

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